

Bonnet Carre Spillway Opening January 2016: Oyster and Water Quality Monitoring Update

Steve Beck | Oyster Task Force | February 2, 2016

January Sampling Events:

-Regular Sampling: Jan 8

-Bonnet Carre Open: Jan 10

-BC Oyster/WQ Sampling: Jan 21

-BC WQ Sampling: Jan 25

-BC Oyster/WQ Sampling: Jan 28

-Continuing Weekly Samples



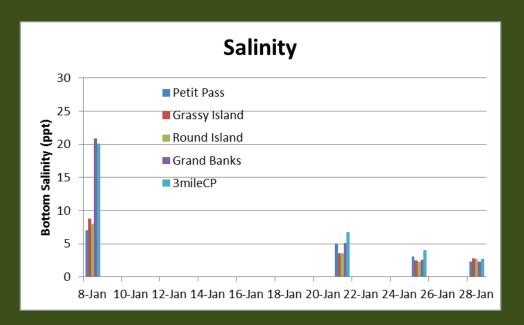


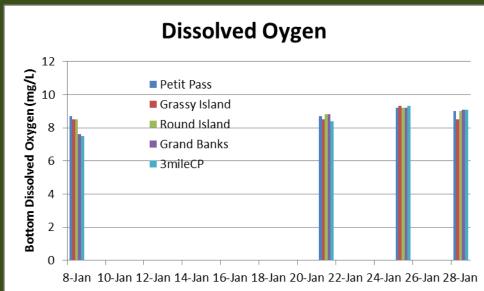


Seed & Sack Size Oyster Mortality



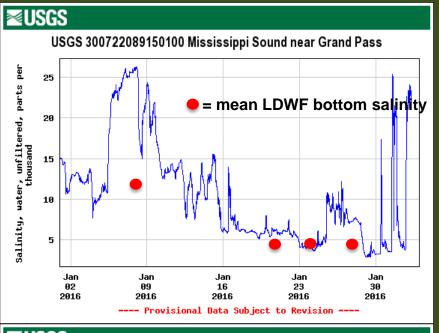


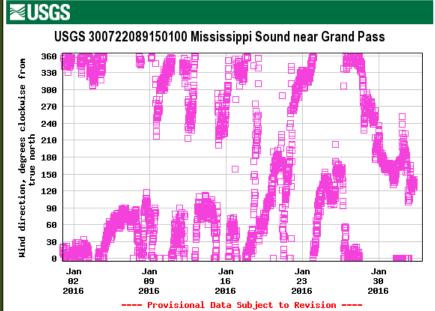






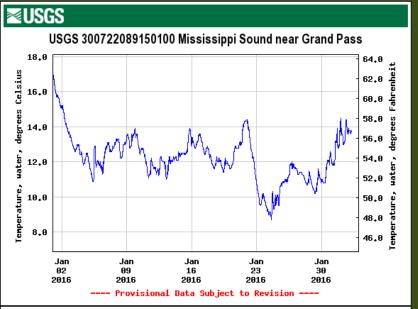
USGS Continuous Recorders

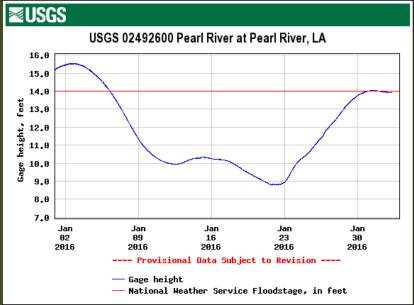






USGS Continuous Recorders







Oyster Transplant Considerations: Summary Table for Recommendation of No Transplant

	2011 Flood Event	Current Flood Event
Duration of Spillway	43	22 (estimated)
Opening (days)		
Mean Flow (cfs)	255,753	104,800
Maximum Flow (cfs)	315,930	203,000
MS Sound Oyster Mort.	59%	TBD
Pre-opening Conditions (~5 weeks prior to opening)		
Mean Water Temperature	23.5	16.8
(°C)		
Mean Salinity (ppt)	13.7	17.7
Pearl River Level (gage	9.7	11.0
height, feet)		

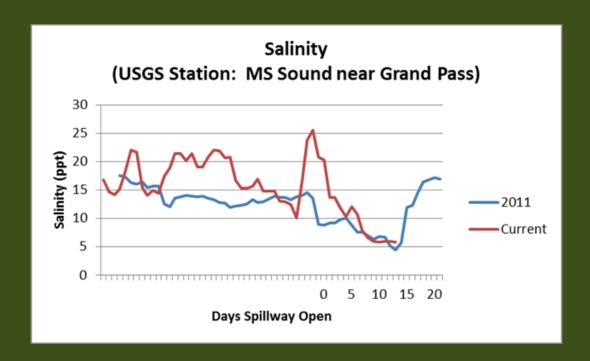


Thursday, Jan 29 Satellite: Questions?



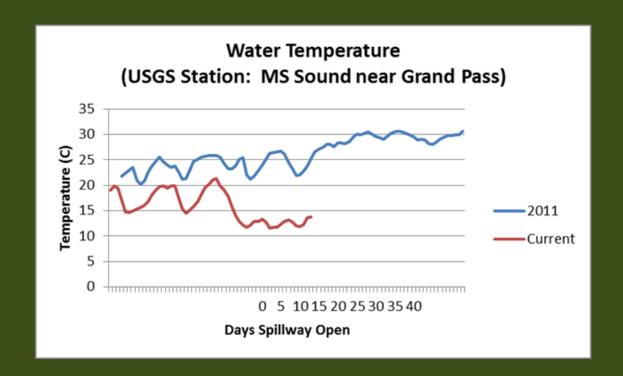


Oyster Transplant Considerations



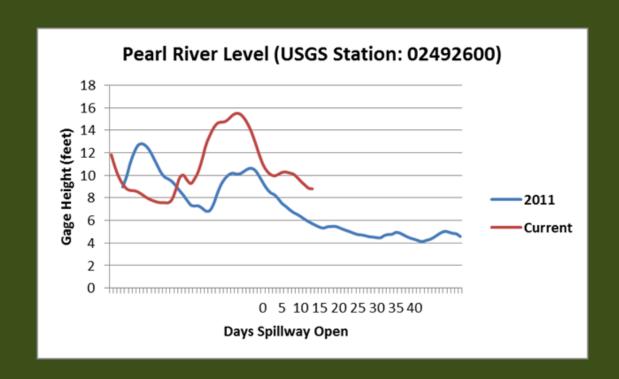


Oyster Transplant Considerations





Oyster Transplant Considerations





Oyster Transplant Considerations (La Peyre et al 2015, JCR)

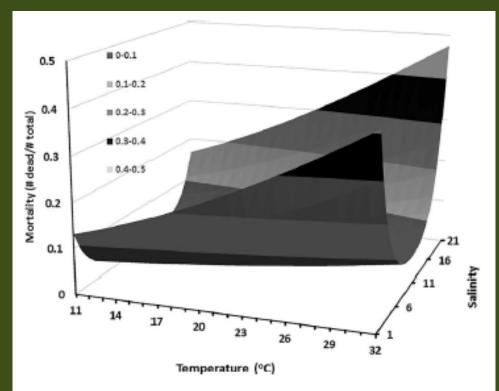


Figure 7. Response surface of oyster mortality, salinity, and temperature from final model ($y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_{11} x_1^2 + \varepsilon$). Horizontal axis is water temperature (°C), vertical axis is predicted probability of mortality, and depth axis is salinity.

